CHAPTER X.

IRRIGATION.

The Irrigation Department is a branch of the Public Works Department, but the revenue arising from it is collected by the Revenue officers, and credited as land revenue in the accounts of the Civil Department. It is only necessary in this book to give the orders relating to the work which falls on the latter, though it has been thought advisable to insert the rules under the Irrigation Act. After the orders relating to canals and larger irrigation works, it has been thought better to put those about well irrigation and small dams and watercourses not constructed by Government, although these rules were mostly passed with reference to the Revenue Survey and belong more properly to the chapters on it. The following are the rules under the Bombay Irrigation Act 1879.

Rules for the management of Canals.

I.—Application for Water for Irrigation.

1.—Applications for water for the purpose of irrigation must be made in duplicate to the Executive Engineer for Irrigation of the Division, or to some other canal officer duly empowered to receive such applications.

When the land to be irrigated is held jointly by two or more holders, the application must be signed by each of such joint holders.

One copy of the application will be retained by the Executive Engineer or other officer aforesaid; the other will be returned with columns 10 and 11 filled in by the Executive Engineer, or other officer aforesaid, to the applicant or applicants.

Applications for water for any purpose other than irrigation may be made in the form of an ordinary letter addressed to the Executive Engineer for Irrigation, or other officer aforesaid.

2.—The Executive Engineer, or other officer aforesaid, after instituting due inquiry, may either reject the application, or comply with it, either in its original form, or subject to such amendment as the applicant at his suggestion, accepts: Provided that—

(1) in every case in which he rejects the application the Executive Engineer, or other officer aforesaid, shall report his pro-

Canal Rules—*(contd.)*

ceedings to the Superintending Engineer for Irrigation for confirmation, to whom also an appeal shall lie against his order;

(2) no owner of a water-course or other person entitled to a supply of water under section 21 (*d*) shall be refused the supply to which he is so entitled.

3.—Except in the case named in the second proviso to the last preceding rule, no application for water for irrigation will be entertained unless the land to be irrigated is demarcated by a clearly distinguishable boundary and has been prepared for irrigation.

4.—All crops for which applications are received between the 15th January and the 15th October will be classed as *kharif*. Those for which applications are received after the 15th October will be classed as *rabi*.

Applications for wet *kharif* crops (such as rice, &c.) should be made before the 1st May and for *rabi* crops before the 15th November.

Applications for water for monsoon dry-crops may be submitted at any time, but applications received before the 1st of May will have priority over those subsequently made.

In all other cases, applications for water shall be complied with, as far as possible, according to their priority.

5.—The decision of the Executive Engineer on applications for water from each water-course should be given on the spot, as far as possible, in the presence of all applicants, who should receive notice to attend.

6.—If, from any cause, the water-supply from a canal proves insufficient to meet all the accepted applications for water, all questions regarding priority of right to receive the available water, and the quantity and regulation of supply, shall be finally determined by the Executive Engineer for Irrigation of the Division:

Provided always that the claims of those applicants whose applications were made before the 1st May for *kharif* crops, and before the 15th November for *rabi* crops, shall have priority over those subsequently made.

II.—Closing of Canals for Repairs, &c.

7.—No canal shall be closed for the execution of any repairs, alterations, or additions thereto, except in cases of emergency, with-

out the previous sanction of the Superintending Engineer for Irrigation, who shall fix the period, or periods, for which the supply of water may be stopped under section 28 (*e*) on account of the execution of such repairs, &c. In cases of emergency a canal may be closed, and the said period, or periods, may be fixed by the canal officer of highest rank on the spot.

III.—Water-supply Rates for Irrigation.

8.—The rates leviable for canal water supplied for purposes of irrigation will be fixed at a certain amount per acre, varying according to the kind of crop to be irrigated and the season of the year in which it is to be grown, and according as the water is obtainable from the canal by lift or flow.

9.—When a field receives the first or preliminary watering, and afterwards no crop is sown during the period named in column 8 of the application as that in which the crop for which the water was applied for should ordinarily come to maturity, the lowest rate chargeable for lift or flow (as the case may be) will be levied.

10.—If mixed crops be grown in the same field, or if different crops be grown in different parts of the same field, the rate shall be calculated on the highest rated crop grown during the period for which water is taken.

11.—When the crop first sown fails and is ploughed up and a fresh crop is sown in the same season, the rate shall be levied on that crop only which comes to maturity.

12.—If only part of a field be irrigated, the rate shall be chargeable on the area of the whole field unless such part shall, from the first commencement of the irrigation, have been clearly demarcated by a ridge not less than half a foot high.

13.—When a portion of a field has been irrigated with canal-water and a portion with well-water, the rate shall be chargeable on the whole field unless the portion irrigated by well-water shall from the first commencement of the irrigation, have been clearly demarcated by a ridge not less than half a foot high.

If the portion demarcated for the purpose of being irrigated by canal-water has nevertheless been partly irrigated by well-water, enquiry shall be made whether the use of well-water was necessitated by a deficiency in the supply of canal-water, and, if it be shown to the satisfaction of the Executive Engineer that it was so,

Canal Rules—(*contd.*)

the rate chargeable on the portion irrigated by canal-water shall not exceed the lift rate.

14.—If well-water is conveyed to any land irrigated from a canal in the same channel as the canal-water, the water-rate shall be chargeable on the whole of the land irrigated from such channel: Provided that if it be shown to the satisfaction of the Executive Engineer that the use of well-water was necessitated by a deficiency in the supply of canal-water, the rate chargeable shall not exceed the lift rate.

15.—The same provisions shall apply to irrigation from escape channels as to irrigation from other parts of a canal.

When the supply of water from any such channel lasts continuously throughout the period for which it is required for use, the same rates shall be levied as for a supply from the canal. When the supply is intermittent, such reduced rates shall be charged as may be fixed in each particular case under the orders of Government.

16.—If a supply of water is obtained by any person from a canal for the purpose of irrigation without the previous permission of the Executive Engineer for Irrigation of the Division, the rate chargeable for such water shall be double the rate chargeable for the authorized irrigation of the area irrigated, and this rate shall be leviable in addition to any penalty which may be imposed under the Act.

17.—Water may be given for the purpose of forming threshing floors free to holders of canal-irrigated fields, and to others at a charge per floor not exceeding half the lowest acreage rate.

Water-supply Rates for Non-irrigational purposes.

18.—Water supplied from a canal for any purpose other than irrigation will be charged for by volume or otherwise at such rate as Government shall from time to time determine.

IV.—Occasional Rates.

19.—The charge to be made under section 45 on account of water supplied through a water-course used in an unauthorized manner shall be as follows (namely):—

(*a*) if the water so used has flowed on any land and such land has derived benefit therefrom, } double the highest rate leviable for a single crop;

(*b*) if the water has flowed on any land but such land has not derived benefit therefrom,	double the rate that would be chargeable under Rule 9;
(*c*) in any other case...	double the rate chargeable under Rule 18 on the volume of water estimated by the Executive Engineer for Irrigation to have been used.

The above charges will be leviable in addition to any penalty which may be imposed under the Act on the person who unauthorizedly used the water.

20.—The charge to be made under section 46 on account of water supplied through a water-course which is suffered to run to waste shall be as follows (namely):—

(*a*) if the water has flowed on any land,	double the rate that would be chargeable under Rule 9;
(*b*) in any other case	double the rate chargeable under Rule 18 on the volume of water estimated by the Executive Engineer for Irrigation to have been wasted.

V.—Remissions.

21.—Remissions of water-rate under the last paragraph of section 31 may be allowed by the Superintending Engineer for Irrigation and may extend to the whole or to a part only of the rate, as he shall in each case think fit.

22.—Claims for such remissions shall be preferred to the Executive Engineer for Irrigation of the Division direct; and if not so preferred within one month from the time when the damage, in respect of which the remission claimed is alleged to have occurred, shall not be entertained.

If, without giving the Executive Engineer at least seven days' notice in writing of his intention, the claimant cuts the crop alleged to have been damaged at any time within 20 days after preferring his application, his claim shall not be entertained.

23.—If the application be preferred within the period prescribed by the last rule, the Executive Engineer shall, within 20 days after the date of its receipt or within the period of the notice, if any

Canal Rules—(*contd.*)

given to him under the said rule, make or cause to be made a local inquiry, at which he or any person acting under his special order in this behalf shall be present, and the result of which shall be recorded on the application, which, together with the opinion of the Executive Engineer, shall then be forwarded to the Superintending Engineer for disposal.

The order passed on the application shall be communicated to the applicant by the Executive Engineer.

24.—Remissions of water-rates may also be granted, at his discretion, by the Superintending Engineer for Irrigation, on reasonable cause being shown, and after due inquiry for any loss caused by deficiency or excess in the supply of water, when such deficiency or excess has been occasioned by some act or omission of a canal officer and independently of any act or omission of the person chargeable with the rate.

Applications for the remission of excess charges on account of water-rates shall also be disposed of by the Superintending Engineer for Irrigation, to whom such applications shall be forwarded for consideration by the Executive Engineer for Irrigation, or by the Collector, through the Executive Engineer for Irrigation.

25.—Any claim for remission of water-rate not falling under Rule 21 or 24 shall be reported by the Collector, through the Commissioner of the Division, for the orders of Government in the Irrigation Department.

26.—Intimation of remissions under Rules 21 and 24 will be communicated by the Superintending Engineer for Irrigation to the Examiner of Public Works Accounts and the Executive Engineer for Irrigation in statements prepared in the form of Appendix No. II.

The Executive Engineer for Irrigation shall keep a register of all authorized deductions from water-rates in the same form.

VI.—Recovery of Dues.

27.—A return of measurements and assessments shall be prepared by such subordinate canal officer as shall from time to time be deputed to this duty by the Executive Engineer for Irrigation of the Division and submitted to the Executive Engineer, who, with the aid of his establishment, shall test at least 10 per cent. of the measured areas.

28.—The Executive Engineer shall from the Register and Return Nos. II. and III. frame a statement of demands for water-rates which he shall forward, together with copies of the Register No. II. and of the Return No. III. to the Collector. This statement shall be rendered on 15th December for *kharíf* and on 1st May for *rabi*.

29.—On receipt of the demand statement the Collector shall issue instructions for the recovery of the amounts therein named from the persons respectively liable for the same.

The rates for *kharíf* shall be payable on the 1st February and those for *rabi* on the 15th June. They shall be payable, each in one instalment, to the revenue officers to whom the land revenue is payable by persons holding land in the villages in which the persons liable therefor respectively reside.

30.—If any objection is raised before the Collector, or any of his subordinates, as to any entry in the said statement, such objections shall be forwarded by the Collector, through the Executive Engineer for Irrigation of the Division, to the Superintending Engineer for Irrigation for disposal under Rule 24, if it has reference to some action on the part of the Irrigation Department; otherwise it shall be disposed of by the Collector, or, subject to the law and rules in force relating to the recovery of arrears of land revenue, by his subordinates.

If the decision of any such objection by the Collector, or any of his subordinates, results in the remission of any portion of any charge entered in the demand statement, the result shall be communicated by the Collector to the Executive Engineer for Irrigation of the Division and shall also be shown in the return to be submitted, under Rule 37, to the Examiner of Public Works Accounts.

Appeals.

31.—Every order passed by an Executive Engineer for Irrigation under Rule 13 or 14 shall be appealable to the Collector, and every order passed by any such officer under Rule 19 or 20 shall be appealable to the Superintending Engineer for Irrigation: Provided always that the appeal be presented within thirty days of the date on which the order appealed against was communicated to the appellant.

32.—All appeals preferred under the Act or under these rules must be made by written petition signed by the appellant. Such petition may be delivered at the office of the authority appealed to

Canal Rules—(*contd.*)

by the appellant in person during office hours, or be forwarded through the post.

Miscellaneous.

33.—Applications for free grants of water-supply shall be referred for the orders of Government in the Irrigation Department, and no such grant shall be made without the previous sanction of Government.

34.—In cases of dispute regarding water-supply, or remission, or abatement of water-rate, the water-gauges and meters set up by the Irrigation Department, shall, if certified by the Executive Engineer for Irrigation of the Division to have been in good order during the period to which the dispute relates, be held to furnish authoritative data for all calculations of discharge.

35.—No canal officer or other officer or subordinate in the Irrigation Department shall

(1) acquire, directly or indirectly, any share or interest in the distribution of water from any canal; or,

(2) purchase, or bid, either in person or by agent, or in his own name or in the name of another or jointly or in shares with others, for any Government property in, on, or appertaining to any canal.

Breach of this rule shall be punishable with a penalty under section 61, clause (9) of the Act.

Returns, &c.

36.—The Executive Engineer for Irrigation shall furnish an annual return, for *kharif* and *rabi* respectively, to the Superintending Engineer for Irrigation and to the Examiner of Public Works Accounts on the same dates on which the statement of demands is sent, under Rule 28, to the Collector. He shall also furnish the Superintending Engineer and the Examiner of Public Works Accounts with a general return on the 15th April of each year.

37.—The Collector shall furnish the Superintending Engineer for Irrigation, through the Executive Engineer for Irrigation of the Division and the Examiner of Public Works Accounts, with annual returns for *kharif* and *rabi* separately, on the 15th April of each year, showing the water-rates and miscellaneous revenue assessed and realized in the Civil Department.

38.—When separate water-rates have not been fixed by Government, but a consolidated soil and water-rate is levied, the Collector shall furnish the Superintending Engineer for Irrigation, through the Executive Engineer for Irrigation of the Division and the Examiner of Public Works Accounts, with an annual general return of consolidated revenue as soon after the close of the revenue year as possible.

39.—The Collectors in Sind shall furnish the Superintending Engineer for Irrigation in Sind and the Examiner of Public Works Accounts, on 15th April of each year, with returns for *kharíf* and *rabi* respectively, of receipts from "*haccaba*" on jághir lands, and of miscellaneous receipts from canals; and the Collectors in Gujárát and the Deccan shall furnish similar returns in cases where separate water-rates are recovered, as per Survey Register, and credited to Government in the Irrigation Department.

[*Note.*—Orders as to cost of collection will be found in G. R. No. 5562, October 30, 1878, Rev. Dept; and G. Rs. Nos. 4678, Dec. 15, 1878, and 2704, Aug. 8, 1879, Finl. Dept.]

2. Under Section 44 of Bombay Act VII. of 1879 water-rates are leviable from Inámdárs as well as from Government occupants on account of increased water-supply owing to the improvement of an existing reservoir. In the case of irrigated Inám lands which were assessed and recorded as dry-crop at the first Survey Settlement, there can be no difficulty in applying Section 44 to the levy of water-rate on account of improved supply from these lands if they now take the Government water. But there may be some difficulty in dealing with lands which, at the original settlement or in summary settlement sanads, were assessed and recorded as irrigated. There may in such cases be a doubt or contention as to the extent to which the amount or duration of the water-supply has been increased by the improvement. If the supply, having formerly lasted up to the end of January, has by the improvement become perennial, the improvement is clear and decided, but if the supply which previously lasted up to the end of January is now stated to have been extended by the improvement,—say, up to the middle of March,—care will be necessary not to over-estimate the extent of the improvement to the injury of the Inámdárs. In such cases Government in the Revenue Department are of opinion that the powers given by Section 44 of the Irrigation Act should be used with caution.—(*G. R. No.* 3706, *June* 28, 1881.)

The right to the water of a river flowing in a natural channel through a man's land, and the right to water flowing to it through an artificial water-course constructed on his neighbour's land, do not rest on the same principle. In the former case each successive riparian proprietor is *prima facie* entitled to the unimpeded flow of the water in its natural course, and to its reasonable enjoyment as it passes through his land as a natural incident to his ownership of it. In the latter, any right to the flow of the water must rest on some grant or arrangement, either proved or presumed, from or with the owners of the lands from which the water is artificially brought or on some other legal origin.—[*Law Reports VI., I. A. p.* 33.]

3. **Increased assessment.**—Survey Officers should, in future, give notice to the holders of land in the vicinity of canals under construction or about to be constructed in a district in which a Survey Settlement is about to be introduced, that on its completion they will be liable to increase of assessment, not only when they take water, but also when they are benefited by the canal through percolation or other advantages.—*G. R. No.* 4799, *Sept.* 7, 1874.*

4. The following rule has been laid down by the Secretary of State on the subject of enhanced assessments to be imposed in consequence of what are called "indirect benefits" arising from a Government Irrigation work.

Where the settlement has enhanced the assessment of any land in consequence of a disadvantage, which would otherwise have caused a lower assessment to be imposed, having been removed by the construction of a Government work of irrigation, the increase of revenue thus occasioned shall be taken credit for by the Irrigation Department. But the Settlement Department is not to assume that, because a work of irrigation has been constructed, the tract in its neighbourhood is necessarily to be assessed higher than it otherwise would be, unless an appreciable increase in the value of land can be directly traced to this cause.—*Sec. of State No.* 5, *Feb.* 23, 1882.

5. **Inam lands.**—The holders of inam lands who use water for irrigation from tanks constructed by Government are to pay water-rate, unless they show that they have a right to use the water.—*G. R. No.* 1546, *March* 26, 1878.

* See Revenue Code, Sec. 55.

6. **Planting of trees.**—Where practicable the embankments of all canals are to be planted with trees of the description that may be most suitable to the several localities.

For firewood the babool will as a rule be found the best. Steps should be taken before the monsoon to procure a sufficient supply of good seed.

Orders should be issued in the Irrigation Department for the planting and conservation of the trees, and the officers should communicate with the Conservator of Forests for advice as to the kinds of trees most suitable and for supplies of seed.

They should also communicate with the Collectors for advice and aid in procuring land adjacent to the canals which it may seem desirable to convert into forest.—*G. R. No.* 1021, *March* 10, 1869.

7. Remuneration of village officers.

Rules for remuneration of Village Officers for collecting irrigation revenue.

I.—If, at the expiration of five years from the time water for irrigation is made use of, the five years' average amount of irrigation receipts raises the revenue of a village 15 per cent., then the revision of the scale remuneration fixed for ten years should take place before the expiry of the term.

II.—In unsurveyed villages, where the remuneration of village officers has not been fixed for ten years, on an average of five years' receipts, the remuneration on irrigation revenue should be paid in the same way as the remuneration on land revenue is paid. In calculating this remuneration, irrigation revenue and land revenue should be added together, and the remuneration calculated on the single sum thus obtained.

III.—In alienated villages where Government do not derive any land revenue, the remuneration on irrigation revenue should be calculated on that revenue alone.

IV.—* * * * * After the expiration of the term for which village officers' remuneration has been fixed, when a new settlement is being made for the next ten years, the public works revenue will form one of the items on which the remuneration is to be calculated.—*G. R. No.* 769, *Feb.* 4, 1866.

NOTE—The mode of ascertaining the receipts due to Irrigation works will be found in G. of I. 346 A. I., Sept. 19, 1876, and other correspondence ending with G. R. No. 86 A. I.—252, April 10, 1878.

Remuneration should be given to village officers for collecting irrigation revenue, although the five years' average of irrigation receipts may not have raised the revenue of the village 15 per cent.

The irrigation revenue should be treated in the same way as land revenue, *i.e.*, thrown into one lump sum, and the percentage on it should be paid according to Wingate's scale.—*G. R. No.* 2457, *May* 8, 1879.

The remuneration for the village officers of Sátára should be calculated according to Rose's scale, which is the one in force in that district, on the whole revenue, that is, land and irrigational revenues put together.

No change should be made in the scale in force in Sátára during the currency of the existing settlement.—*G. R. No.* 2532, *April* 18, 1882.

The following orders belong to the subject of irrigation, but the works referred to in them do not come under the Irrigation Department:—

8. **Well irrigation.**—It is the desire of Government to encourage in every possible way the construction of wells, especially in the Deccan Collectorates, and applications for advances will receive favourable consideration. The fullest publicity should be given to the wishes of Government in this respect, and it should be explained that no increase of assessment will result on the revision of the rates in consequence of the construction of wells.—*G. R. No.* 3906, *Aug.* 14, 1871.

9. The plan of assessing lands irrigated by wells in districts like those of Indapoor and Mareh at the highest jerayet rate instead of imposing an extra well-assessment has the entire approval of Government. But a maximum jerayet rate should clearly not be imposed in cases where a well has been constructed since the introduction of the Survey, and where that alone, and not the actual quality of the soil, warrants the imposition. To do so would in effect be to tax improvements made during the currency of a settlement, and would be in contravention of Section 30 of the Survey Act.† The only principle on which such a proceeding would be justifiable, would be in consideration of the water-bearing properties of the soil. But the Survey Officers have admitted their inability to act on this

† Now Section 106, Revenue Code.

principle generally, and the result of the proposed system would be to tax the man whose enterprise and labour have induced him to sink a well, while his neighbour, whose land may possess precisely the same properties, escapes the extra burthen, simply because he has not availed himself of his opportunities.

It is of the highest importance to offer every encouragement to the increase of the number of wells in those districts which are so subject to drought.—*G. R. No.* 4050, *Aug.* 22, 1871.

NOTE.—See also Rules for Takávi in chap. VIII.

10. The orders in respect to the revision of the assessment on lands irrigated from wells are—

1. That in the case of old wells constructed before the first settlement, all special water assessment should be abandoned, and the maximum jerayet rate alone levied.

2. That in the case of new wells constructed subsequent to the first settlement, the ordinary dry crop rate should be imposed without any addition whatever on account of the new wells.

The first rule was intended in the first instance to be applicable to the drier talookas of the Deccan Collectorates, where the rainfall is, as a rule, light and uncertain. It is now generally adopted in the Deccan and Southern Maratha Country.

Boorkees of permanent construction are to be treated as wells. There is no objection to classing at a higher rate land within a certain distance from a stream from which water can be obtained by means of a Boorkee. The same principle may be adopted in the case of land which derives benefit from its proximity to a tank. This should form part of the regular process of classification, in order that it may be tested by the Classing Assistants in the same manner as other classification returns.—*G. R. No.* 1028, *Feb.* 25, 1874.

Government are now prepared to give a general assurance that Clause (*b*), Sec. 107, Land Revenue Code, will not be applied to wells dug at the expense of the owner or occupier of the soil. In the same way in any other specific case, Government will decide at the request of an applicant for an improvement loan, whether the clause applies to his project or not. Government are also willing to give general application to the two rules as to wells in force in the Deccan and Southern Marátha Country.—*G. R.* 6682, *Nov.* 10, 1881.

11. Village Bandharas.

Rules regarding Bandharas (dams) built across streams or nullas.

I.—Lands under bandharas existing at the original settlement, have been assessed at garden rates, and will, at the revision, pay whatever revised rates may be determined upon.

II.—Lands classed as dry-crop at the original settlement, but which have been converted into garden by the use made of water from public streams beyond the limits of the occupancy of the cultivator during its currency will be assessed at the revision at garden rates, modified according to the quantity of water obtainable, the number of months for which it can be depended upon, the description of cultivation which it will render practicable, the cost of providing the means for obtaining water or forming the water-courses (páths) necessary for its utilization.

III.—When lands are classed at the revision settlements as dry crop, and it is desired to convert them into garden during the currency of those settlements by the construction of temporary or permanent bandharas on, or by drawing water directly from, streams not within the boundary of a cultivator's occupancy, the previous permission of the Collector must be obtained, and any person erecting a bandhara or drawing water without such permission will be liable to the penalties prescribed by law. On giving permission the Collector may couple it with such conditions as to payment of garden rates, the removal of obstructions to the stream arising from the means employed to obtain water, &c., as may be desirable. In those collectorates in which it may have been the custom to levy extra rates at once without waiting for the expiration of existing settlements, the practice will continue, but where such has not been the practice, it will be left to the Collector, under the orders of the Commissioner, to make such conditions as to keeping channels clear, and other matters relating to the use of the water, as he may consider fair and reasonable.

The Collector will, in granting such permission, pay due regard to the interests of those who may have already erected bandharas on the same stream, and will further take care to obtain from the applicant a written acknowledgment of the rights of Government to make other use of the water at any future time, if they should think fit to do so—to remove the bandhara without compensation

whenever it may be desirable—and to compel the applicant to clear the stream of any obstruction caused by his neglect to keep the bandhara in proper order.—*G. R. No.* 3618, *July* 14, 1874.

12. If bandharas are erected without permission, they will either be removed, or the lands watered from them assessed as bagayet. Mamlutdars and their subordinates and village officers are to report if they find bandharas so erected without permission.—*G. R. No.* 3172, *June* 23, 1874.